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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,395	06/27/2003	David H. Hanes	100201461-1	9366

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EXAMINER

PATEL, HARI

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/609,395	<b>Applicant(s)</b> HANES, DAVID H.	
	<b>Examiner</b> Hari Patel	<b>Art Unit</b> 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 25 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1 – 25 are presented for examination.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 – 4, 8, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. With respect to Claim 2, line 2 recites, “generating an input/output request”. It is believed the Applicant intended for this limitation to recite, “generating [[an]] the input/output request” to coincide with the disclosure of “generating an input/output request” in Claim 1, line 6.

5. With respect to Claim 3, lines 2-3 recite, “wherein parsing one or more field values”. It is believed the Applicant intended for this limitation to recite, “wherein parsing the one or more field values” to coincide with the disclosure of “parsing one or more field values” in Claim 2, line 3.

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6. With respect to Claim 4, line 2 recites, “generating an input/output request formatted according to an adapter interface layer”. It is believed the Applicant intended for this limitation to recite, “generating ~~[[an]]~~ the input/output request formatted according to ~~[[an]]~~ the adapter interface layer” in accordance with Claim 1, lines 6-7.

7. With respect to Claim 8, line 2 recites, “conveying the generated input/output request to a host adapter”. It is believed the Applicant intended for this limitation to recite, “conveying the generated input/output request to ~~[[a]]~~ the host adapter” in accordance with Claim 7, lines 2-3.

8. With respect to Claim 25, line 1 recites, “wherein receiving an input/output request”. It is believed the Applicant intended for this limitation to recite, “wherein receiving ~~[[an]]~~ the input/output request” in accordance with Claim 23, line 3.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 1, 4, 7, and 9 – 23 are rejected under 35 U.S.C. 102(b) as being unpatentable by Cook et al. (U.S. Patent No. 5,513,365).

11. With respect to Claim 1, Cook et al. (hereinafter, referred to as “Cook”) teach a computer-readable medium (*Fig. 3 – Memory, 530*) having stored thereon an instruction set to be executed, the instruction set, when executed by a processor, causes the processor to perform a computer method (*col. 3, lines 30-32*) of:

receiving an input/output (I/O) request formatted in accordance with an application programming interface (API) (*Fig. 4; and col. 3, lines 47-57*);

generating an I/O request formatted in accordance with an adapter interface layer (*ref. no. 700 of Fig. 4*); and submitting the generated I/O request to the adapter interface layer submitting the generated I/O request to the adapter interface layer (*Fig. 4; and col. 3, lines 58-63*).

12. With respect to Claim 4, Cook teaches the computer-readable medium according to Claim 1, wherein the I/O request is generated according to a pass-through interface of an operating system, and submitting the generated I/O request to the pass-through interface (*col. 3, lines 51-57*).

13. With respect to Claim 7, Cook teaches the computer-readable medium according to Claim 1, wherein submitting the generated I/O request further comprises conveying the generated I/O request to a host adapter (*Fig. 4 – Display Adapter*).

14. With respect to Claim 9, Cook teaches the computer-readable medium according to Claim 1, wherein the instruction set, when executed by the processor, further causes the processor to perform the computer method of:

receiving a return data set formatted in accordance with the adapter interface layer, and translating the return data set into a format compatible with the application programming interface (*col. 3, lines 51-63*).

15. With respect to Claim 10, Cook teaches the computer-readable medium according to Claim 1, wherein the translated return data set is conveyed to a client application that generated the received I/O request (*Fig. 4 – 600 / 605 / 610*).

16. As per Claims 11 – 15, they are directed to a method for processing the I/O request in accordance to a processor executing instructions stored on a computer-readable medium as set forth in Claims 1, 7, 9, and 10 above. Since Cook teaches the claimed processor which executes instructions to perform a method of an processing I/O request, Cook also teaches the claimed method for processing the I/O request in a computer system. A translation layer would inherently be required to convert one set of code to another when communicating between interfaces.

17. As per Claims 16 – 22, they are directed to a computer system for processing the I/O request in accordance to a processor executing instructions stored on a computer-

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readable medium as set forth in Claims 1, 3, 7, 9, and 10 above. Since Cook teaches the claimed processor which executes instructions to perform a method of processing an I/O request, Cook also teaches the claimed computer system for processing the I/O request in a computer system

18. As per Claim 23, it is directed to a method for processing the I/O request in accordance to a processor executing instructions stored on a computer-readable medium as set forth in Claims 1 above. Since Cook teaches the claimed processor which executes instructions to perform a method of processing an I/O request, Cook also teaches the method for processing the I/O request in a computer system.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook ('365) as applied to claim 7 above.

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21. With respect to Claim 8, it would have been obvious to one of ordinary skill in the art that the computer-readable medium according to Claim 7 comprises conveying the generated I/O request to a small computer system interface (SCSI) host adapter. This would have been obvious because a SCSI adapter is a standard interface and command set for transferring data between devices (*Cook – Figs. 3 and 4*) on both internal and external busses.

22. Claims 2, 3, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 1 above, and further in view of Housel, III (U.S. Patent No. 5,339,421).

23. With respect to Claim 2, Cook teaches the computer-readable medium as applied to Claim 1 above, however, Cook does not teach wherein generating the I/O request further comprises parsing one or more field values from a data structure referenced by the received input/output request and inserting the parsed field values into respective fields of a data structure. Specifically, Cook teaches a computer-readable medium storing instructions executable by a processor capable of processing an I/O request in accordance with an API and an adapter interface layer. Cook fails to teach that generating the I/O request requires parsing of values from a data structure and inserting the parsed values into respective fields of a data structure.



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24. Housel, III (hereinafter, referred to as "Housel") teach a computer-readable medium (*memory*) storing instructions executable by a processor to perform a method of parsing values from a data structure in accordance with an API (*Fig. 21; col. 24, lines 2-6; and col. 9, lines 50-52*). It would have been obvious to one of ordinary skill in the art that once the values have been parsed, they would be inserted into fields of a data structure.

25. It would have been obvious to one of ordinary skill in the art to combine the teachings of Cook and Housel because they both teach a computer-readable medium storing instructions executable by a processor to perform a computer method in accordance with an API. Housel's teaching of data structure allows values in the data structure to be parsed and inserted into respective fields.

26. With respect to Claim 3, Cook – Housel teach parsing and inserting of data structure values as applied to Claim 2 above. Since a request block data structure comprises a data structure for issuing commands to a peripheral device and Cook discloses use of peripheral devices (*Fig. 3*), Cook – Housel teach the computer-readable medium of Claim 3 wherein the data structure is a request block data structure.

27. As per Claim 24, it is directed to a method for processing the I/O request in accordance to a processor executing instructions stored on a computer-readable

medium as set forth in Claims 2 above. Since Cook teaches the claimed processor which executes instructions to perform a method of processing an I/O request, Cook also teaches the method for processing the I/O request in a computer system.

28. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 1 above, and further in view of Baker et al. (U.S. Patent No. 5,442,789).

29. With respect to Claim 5, Cook teaches the computer-readable medium as applied to Claim 1 above, however, does not teach that the processor further identifies a command type of the received I/O request, and having a command type corresponding to the identified command type. Specifically, Cook teaches a processor capable of processing an I/O request in accordance with an API. Cook fails to teach the processor performing a method of identifying a command type of the received I/O request.

30. Baker et al. (hereinafter, referred to as "Baker") teaches a processor capable of processing an I/O request in accordance with an API (*col. 25, lines 42*) wherein the processor identifies a command type of the received I/O request (*col. 25, lines 62-65*).

31. It would have been obvious to one of ordinary skill in the art to combine the teachings of Cook – Baker because they both teach a processor capable of processing an I/O request in accordance with an API. Baker's disclosure further teaches a processor, in accordance with an API, can identify command types.

32. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook, Housel, and Baker as applied to claims 2 and 5 above.

33. With respect to Claim 6, Cook – Housel – Baker teach the claimed computer-readable medium as applied to Claims 2 and 5 above.

34. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 1 above, and further in view of Goshey et al. (U.S. Patent No. 6,327,613).

35. With respect to Claim 25, Cook teaches the method of Claim 23 as applied to Claim 23 above, however, does not teach receiving an I/O request formatted in accordance with an advanced small computer system interface (SCSI) programming interface (ASPI), the ASPI format unsupported by the operating system of the computer system. Specifically, Cook teaches a method for processing I/O requests in accordance with an API. Cook fails to teach the use of an ASPI.

36. Goshey et al. (hereinafter, referred to as “Goshey”) teaches a method of receiving an I/O request formatted in accordance with an advanced small computer

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system interface (SCSI) programming interface (ASPI), the ASPI format unsupported by the operating system of the computer system (*col. 8, lines 41-44; and col. 13, lines 38-42*).

37. It would have been obvious to one of ordinary skill in the art to combine the teachings of Cook and Goshey because they both teach a method of processing I/O requests in accordance with an API. Goshey's teaching of an ASPI would allow processing of I/O requests despite being unsupported by the operating system of the computer system.

### ***Conclusion***

38. Any inquiry concerning this communication from the examiner should be directed to Hari Patel whose telephone number is 571-272-2743. The examiner can normally be reached on Monday – Thursday from 8:00am – 5:30pm and every other Friday from 8:00am – 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee, can be reached at 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Hari Patel  
Examiner  
Art Unit 2115

